

10/053010

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VIRTUALIZATION OF iSCSI STORAGE

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ABSTRACT OF THE INVENTION

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This invention describes methods, apparatus and systems for virtualization of

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iSCSI storage. Virtual storage isolates the clients from the management of

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physical storage resources. In this invention, each physical storage device

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supports multiple logical units (LUNs). Each supported LUN is associated with a

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separate TCP port number and iSCSI commands received on a given port

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implicitly refer to the associated LUN. An iSCSI host addresses each logical unit

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of storage (LUN) with a virtual IP address and port number. Using an address

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translation table, the virtualization gateway rewrites the destination IP address in

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the header of an incoming packet as well as the destination port number to

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correspond to the target physical LUN. Migration of logical units across physical

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storage devices is supported by changing the address translation entries at the

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gateway; and the gateway can be provided by a standard network router with

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support for address translation.

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